CLAIMS

1. An artificial antigen which is specifically recognized by the antifilaggrin autoantibodies present in the serum of patients suffering from rheumatoid arthritis, which consists of a recombinant or synthetic polypeptide comprising all or part of a sequence derived from that of a filaggrin unit, by replacing at least one arginine residue with a citrulline residue.

2. The artificial antigen as claimed in claim 1, which consists of a peptide comprising all or part of at least one sequence derived:

- from the sequence corresponding to amino acids 144 to 314 of a human filaggrin unit, or alternatively

- from the sequence corresponding to amino acids 76 to 144 of a human filaggrin unit,

by replacing at least one arginine residue with a citrulline residue.

3. The artificial antigen as claimed in claim 2, which consists of a peptide comprising all or part of at least one sequence derived from the sequence corresponding to amino acids 71 to 119 of a human filaggrin unit, by replacing at least one arginine residue with a citrulline residue.

4. The artificial antigen as claimed in claim 1, which consists of a peptide comprising all or part of at least one sequence derived from one of the sequences SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 6, by replacing at least one arginine residue with a citrulline residue.

5. Use of the antigen as claimed in any one of claims 1 to 4 for the *in vitro* diagnosis of rheumatoid arthritis.

6. An antigenic composition for diagnosing the presence of autoantibodies specific for rheumatoid arthritis in a biological sample, which contains at

C3 least one antigen as claimed in any one of claims 1 to 4, optionally labeled and/or conjugated with a carrier molecule, with the exclusion of compositions with a structure identical to that of a preparation of isoforms of filaggrin which is purified from the human epidermis comprising a mixture of isoforms having a molecular weight of 40,000 and a pI ranging between 5.8 and 7.4. Is this SDS-page ?

7. A method of detecting the autoantibodies specific for rheumatoid arthritis in a biological sample, which method comprises:

- bringing said biological sample into contact with an A antigen as claimed in any one of claims 1 to 4, ~~or an~~ A ~~antigenic composition as claimed in claim 6~~, under conditions allowing the formation of an antigen/antibody complex with the autoantibodies specific for rheumatoid arthritis which may be present;
- A - detecting, ~~by any appropriate means~~ the antigen/antibody complex which may be formed.

8. A kit for the detection of autoantibodies specific for rheumatoid arthritis in a biological sample, which comprises at least one antigen as claimed A in any one of claims 1 to 4, ~~or an antigenic~~ A ~~composition as claimed in claim 6~~, as well as buffers and reagents appropriate for constituting a reaction medium allowing the formation of an antigen/antibody A complex, ~~and/or means for detecting said~~ A ~~antigen/antibody complex~~.

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